

# Vehicle battery

## BATTERY WARNING SYMBOLS



Do not allow naked flames or other sources of ignition near the battery, as the battery may emit explosive gases.



Make sure when working near or handling the battery, suitable eye protection is worn, to protect the eyes from acid splashes.



To prevent risk of injury, do not allow children near the battery.



Be aware that the battery may emit explosive gases.



The battery contains acid which is extremely corrosive and toxic.



Consult the handbook for information, before handling the battery.

## CONNECTING JUMP LEADS



Do not connect the jump leads to any battery terminal on your vehicle. Doing so may cause a spark, which can result in an explosion. It may also result in damage to the charging system.



Rotating parts of the engine can cause serious injury. Take extreme care when working near rotating parts of the engine.



Before attempting to start a vehicle, make sure that the parking brake is applied, or suitably chock the wheels. Make sure that Park is selected.



Suitable eye protection must be worn when working in the area of the battery.



During normal use, batteries emit explosive gas sufficient to cause severe explosions and capable of causing serious injury - keep sparks and naked lights away from the battery.



Make sure there is no physical contact between the donor and disabled vehicles other than the jump leads.

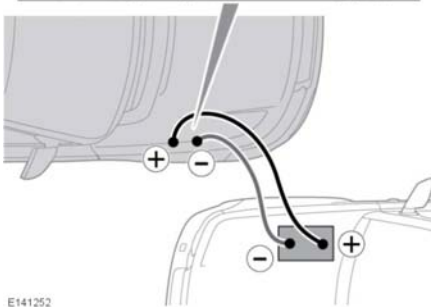
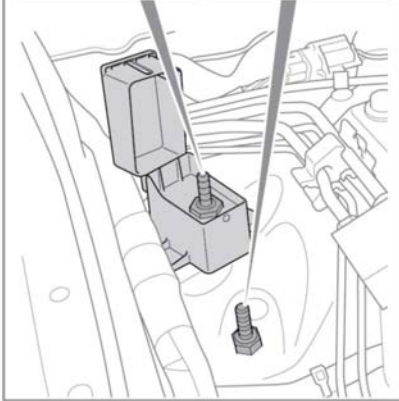
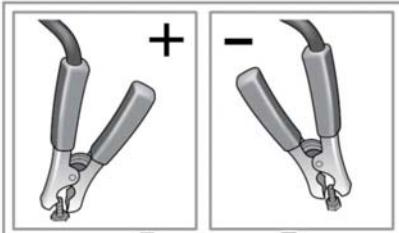


Make sure that any battery or starting aid is a 12 volt device.



Disconnect the jump leads prior to operating any electrical equipment.

**Note:** Before connecting jump leads make sure the battery connections on the vehicle are correct, and that all electrical equipment has been switched off.



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1. Connect 1 end of the positive (Red) jump lead to the positive terminal on the donor vehicle.
2. Connect the other end of the positive (Red) jump lead to the positive jump start terminal on the disabled vehicle.
3. Connect 1 end of the negative (Black) jump lead to the negative terminal on the donor vehicle.

4. Connect the other end of the negative (Black) jump lead to the earth/ground jump start terminal on the disabled vehicle.

**Note:** Check that all cables are clear of any moving components, and that all 4 connections are secure.

5. Start the engine of the donor vehicle, and allow it to idle for a few minutes.
6. Start the engine of the disabled vehicle.  
**Note:** Do not switch on any electrical circuits on the previously disabled vehicle, until after the jump leads have been removed.
7. Allow both vehicles to idle for a few minutes.
8. Switch off the donor vehicle.
9. Disconnect the negative (Black) jump lead from the previously disabled vehicle.
10. Disconnect the negative (Black) jump lead from the battery of the donor vehicle.
11. Disconnect the positive (Red) jump lead from the previously disabled vehicle.
12. Disconnect the positive (Red) jump lead from the donor vehicle.

## CONNECTING A STARTING AID



**Do not connect the starting aid to any battery terminal on your vehicle. Doing so may cause a spark, which can result in an explosion. It may also result in damage to the charging system.**

To start the vehicle using a starting aid or a slave battery, follow the instructions in the sequence given.

1. Connect the positive (Red) cable to the positive jump start terminal of the disabled vehicle.

# Vehicle battery

2. Connect the negative (Black) cable to the negative jump start terminal of the disabled vehicle.
3. Connect/switch on the starting aid.
4. Start the engine and allow it to idle.
5. Disconnect/switch off the starting aid.
6. Disconnect the negative (Black) cable from the negative jump start terminal of the vehicle.
7. Disconnect the positive (Red) cable from the positive jump start terminal of the vehicle.

## CHARGING THE VEHICLE BATTERY



The battery must be disconnected and removed from the vehicle before charging. Failure to do so could result in damage to the vehicle's electrical system.



Battery disconnection, removal and replacement, should only be carried out by qualified personnel. Consult your Dealer/Authorised Repairer.

## REPLACING THE VEHICLE BATTERY



Battery disconnection, removal and replacement, should only be carried out by qualified personnel. Consult your Dealer/Authorised Repairer.



Used batteries must be disposed of correctly as they contain a number of harmful substances. Seek advice on disposal from your Dealer/Authorised Repairer and/or your local authority.

## BATTERY MONITORING SYSTEM

The Intelligent Power System Management (IPSM) continuously monitors the condition of the main vehicle battery. If excessive battery discharge occurs, the system will begin to shut down non-essential electrical systems in order to protect the battery.

If the IPSM calculates that battery condition is not within set parameters, there are 2 levels of action which can be taken. Both levels have an accompanying message on the Touch screen, and in the case of the low battery warning, in the Message centre.

- **Energy Management:** Will be displayed on the Touch screen if the engine is not running, and system features are causing excessive battery discharge. After 3 minutes the IPSM will begin shutting down vehicle systems. Normal system operation will resume when the engine is started.
- **Low Battery - Please Start Engine:** Will be displayed on the Touch screen and Message centre if the engine is not running. After 3 minutes the IPSM will begin shutting down vehicle systems. Normal system operation will resume when the engine is started.



Only start the engine if it is safe to do so.

**Note:** If the message **Low Battery - Please Start Engine** is displayed, drive the vehicle for at least 30 minutes in temperatures above 0°C (32°F) or at least 60 minutes if temperatures are below 0°C (32°F). This will allow the battery to recover to an acceptable level. If normal system operation is not resumed when the engine is switched back off, the battery may not have been sufficiently charged. If safe to do so, re-start the engine. If problems still exist, contact your Dealer/Authorised Repairer.